THE

Saturday Magazine.

No. 699. MAY 27TH, 1843. { PRICE ONE PENNY.

FRESCO PAINTING.

GROTESQUE FRESCO. *(From the Gallery of the Palace of the Vatican.)*

In the year 1841, a committee was appointed by the House of Commons to inquire into and report upon the state and prospects of the English school of Painting, the chief object being to determine upon a plan whereby the architect and the artist might work in conjunction with each other for the decoration of the new Houses of Parliament. In the report of the committee the employment of fresco painting was recommended; but the necessity of further inquiry on the subject was suggested. This led to the appointment of a royal commission of Fine Arts, the members of which in the spring of 1842 presented their report * to Her Majesty, in which they stated their inability to satisfy themselves that the art of fresco painting had hitherto been sufficiently cultivated in this country to justify them in at once recommending that it should be employed in the decoration of the new Houses of Parliament; but in order to assist them in forming a judgment on this matter, it was proposed that artists should be invited to enter into a competition in cartoons. A public announcement was accordingly made, inviting British artists to compete for certain pecuniary prizes, by submitting cartoons to the notice of judges to be appointed to decide on the relative merit of the works. It was stipulated that the drawings should be executed in chalk, or in charcoal, or some similar material, but without

* An appendix is added to this report, by Mr. Eastlake, in which is collected much valuable information on the subject of fresco painting.

colours; the subjects to be selected from British History, or from the works of Spenser, Shakspere, or Milton; and the figures to be not less than the size of life.

Although the subjects for the exercise of the artist's skill were thus, to a certain extent, defined, it was expressly stated by the commissioners that such limitation was not meant to imply the adoption of any particular scheme for the decoration of the Houses of Parliament. The object in fact was to encourage among artists that which is so indispensable in fresco painting, namely, "precision of drawing, founded on a knowledge of the structure of the human figure; a treatment of drapery uniting the imitation of nature with a reference to form, action, and composition, and a style of composition less dependent on chiaroscuro than on effective arrangement."

As the time is now arrived for the exhibition of these cartoons to the public (Westminster Hall being the place destined for their reception), it may be interesting to give a popular notice of fresco painting; an art, which it is hoped is now about to be introduced into this country under the most favourable circumstances of patronage.

Respecting the origin of the term fresco there are two opinions: according to some the term is said to have been adopted because the practice of it is used in the open air. Thus in the Italian language, *andare al fresco* signifies "to take the air;" or "to walk abroad in the air;" but a more probable explanation is to be found in another meaning of the word fresco, viz., "new," or "fresh," as applied to the state of the plaster in which it is wrought. The artist traces his design, colours it, and completely finishes in one day so much of his picture as will occupy the wet plaster ground that has been prepared for him, so that when the ground is dry he may not retouch any part of his work. This is the characteristic distinction of painting in fresco—a method by which the painting is incorporated with the mortar, and drying along with it becomes extremely durable, and brightens in its tones and colours as it dries.

It will therefore be readily conceived that the artist in fresco has to encounter difficulties of no ordinary kind; a few of them are thus noticed by a writer in REES's *Cyclopædia*:—

From the necessity there is in the progress of this style of art, that it should be executed with rapidity, and from the impossibility of retouching it without injuring the purity of the work; the artist, unless he be endowed with very extraordinary powers of imagination and execution indeed, is obliged to prepare a finished sketch of the subject, wrought to its proper hue and tone of colour, and so well digested, that there may be no necessity for making any essential alterations in the design. This, which is a very useful mode of proceeding in all fine works of painting, is absolutely indispensable in fresco, to those who are not determined to give the rein to their ideas, and leave as perfect whatever may first present itself. There is no beginning in this, by drawing in the whole of the parts at one time, and correcting them at leisure, as is the custom with oil-painters, who may therefore proceed to work without a sketch; here all that is begun in the morning must be completed in the evening; and that almost without cessation of labour, while the plaster is wet; and not only completed in form, but also, a difficult, nay almost impossible task, without a well prepared sketch, must be performed, viz., the part done in this short time must have so perfect an accordance with what follows, or has preceded, of the work, that when the whole is finished, it may appear as if it had been executed at once, or in the usual mode, with sufficient time to harmonize the various forms and tones of colour. Instead of proceeding by slow degrees to illuminate the objects, and increase the vividness of the colours, in a manner somewhat similar to the progress of nature in the rising day, till at last it shines with all its intended effect, which is the course of painting in oil, the artist working in fresco must at once rush into broad daylight, at once give all the force in light, and shade, and colour, which the nature of his subject requires, and this without the assistance (at least in the commencement) of contrast to regulate his eye; so that here, as has been said, a well digested and finished sketch seems indispensably requisite.

The custom of decorating walls with paintings is very ancient. Those discovered by Belzoni, among the royal tombs of Egypt, prove the existence of the art among the Egyptians many centuries before the Christian era. There is also abundant evidence that it was practised by the Etruscans and Romans. But the more common practice up to the time of Augustus seems to have been to paint the walls of houses of one single colour, and to relieve this with fantastic ornaments. According to Pliny, Augustus was the first to suggest the covering of whole walls with pictures and landscapes. About the same time a painter named Ludius invented that style of decoration, now called *arabesque* or *grotesque*, many beautiful examples of which have been discovered at Pompeii and other places. The invention of the Arabesque style, as its name implies, has been improperly claimed for the Arabians of Spain; whose religion forbidding the representation of animals, they employed foliage, stalks, stems, tendrils, flowers, and fruit, in a variety of forms and combinations, with which they adorned the surfaces of their buildings. Hence the fanciful combinations of natural objects occupying a flat surface came to be called Arabesque, although it differed so much from the Mohammedan compositions as to contain animals real or fabulous. That the term is badly chosen, especially as applied to the fanciful enrichments on the walls of Pompeii, &c., will be seen from the fact that such ornaments were invented and executed long before the sons of Ishmael had learned to draw. The term grotesque is less objectionable: it is derived from the subterranean rooms (grotte) in the baths of Rome, in which those specimens of ancient art were found, from which Raphael derived the plan of the beautiful frescos which adorn the piers and pilasters of the arcaded gallery of the palace of the Vatican, called, in honour of the artist, "Le Logge di Raffaelle."

The practice of Fresco Painting may be conveniently considered under the following heads:—1. The Cartoon. 2. The preparation of the wall. 3. The process of painting. 4. The colours and implements. The methods as adopted by different artists are of course subject to variation; but as general principles are not altered by variations in those details which conduce to the same end, so the following may be taken as an accurate exposition of the practice of the art.

1. *The Cartoon.* Since the artist cannot without injury retouch a fresco painting, it is necessary that every part of the design be decided on by preparatory sketches finished of the full size, from which the fresco may be transferred, by tracing, to the wall. When the painting is very large, the whole composition of the full size is sometimes divided into two or more cartoons.

In the preparation of a cartoon, a strong cloth is stretched on a frame, as if to be prepared for painting; paper is then firmly glued on the cloth. When this is dry, a second layer of paper is attached by glue. The edges of the separate sheets, where they overlap, are scraped, so as to preserve an even surface. The surface is then prepared for drawing with size and alum*. The drawing is made with charcoal, and when finished is fixed by wetting the cloth at the back with cold water, and then steaming the drawing in front. The steaming is performed with a tea-kettle with two or three spouts, kept boiling by the flame of a spirit-lamp; by this means the charcoal is incorporated with the melted glue, and a solid surface like that of a picture is produced.

From this finished drawing the outline is traced on oiled paper. As much of this working outline as can

* The term Cartoon is derived from *cartone*, the augmentative of *carta*, the Italian for *paper*.

be finished in one painting is then nailed to the wet wall, and the forms are again traced with a sharp point, whereby an indented outline is produced on the soft plaster. According to another method, the paper to be applied to the wall is placed behind and in close contact with the finished cartoon; the outlines of the latter are then pricked, and a similar pricked outline is thus produced on the paper behind. This pricked paper is then made the working drawing; it is fastened to the wall, and dusted with a little bag filled with black or red dust; this leaves a dotted outline on the wall. This method is sometimes adopted for small works, and the advantage of it is that it leaves the surface of the plaster undisturbed. The first mode is, however, generally preferred; since it insures the best and most decided outline, and preserves the finished cartoon uninjured.

Cartoons prepared for fresco may be seen in the National Gallery: those at the head of the staircase are by Agostino Caracci. In one of these (the Triumph of Galatea) the pricked outline is very apparent; as also in the fragment of the Cartoon by Raphael, (the Murder of the Innocents) also in the National Gallery. In many celebrated Italian frescos the indented outline, produced by tracing, is apparent.

In addition to the cartoon it is desirable to have a coloured sketch of the whole composition.

2. *The preparation of the Wall.* The greatest obstacle to the permanence of fresco painting is damp: hence, if the wall to be painted is covered with old mortar, the ingredients of which are unknown, this coat should be entirely removed until the solid brick or stone is laid bare. The rough coat then applied is composed of river-sand and lime, and of such thickness as is generally used in preparing the walls of dwelling-houses. The surface of this coat should be rough, but not uneven. Thus prepared, the wall should be suffered to become perfectly dry and hard; the longer it remains in this state the safer it will be, especially if the lime used was in the first instance fresh. In that case two or three years should elapse before the process of painting is commenced.

The preparation and seasoning of the lime is one of the essential conditions of fresco painting. At Munich it is made and kept as follows:—A pit is filled with clean burnt limestone which is slaked, and then stirred continually till it is reduced to an impalpable consistence. The surface having settled to a level, clean river-sand is spread over it to the depth of a foot or more, so as to exclude the air, and, lastly, the whole is covered with earth. It is allowed to remain thus for at least three years before it is used, either for the purposes of painting (lime being the white pigment) or for coating the walls.

The last preparation for painting on the mortar is as follows:—The surface is wetted with pure water, till it ceases to absorb. A thin coat of plaster is then spread over that portion only which is to be painted: the surface of this coat should be moderately rough. As soon as it begins to set (*i.e.* in about ten minutes or so, according to the temperature) a second thin coat is laid on, somewhat fatter, that is, with more lime and less sand. The plaster is laid on, and the surfaces are smoothed with a wooden trowel. Some painters like to work on a perfectly smooth surface, in which case the last coat is polished by applying a piece of paper on the surface and passing the trowel over it. When a small amount of roughness is required, a dry brush, or a piece of beaver nap attached to the trowel, is passed over the plaster in all directions.

As you brew, you must bake.

He who brews unskilfully, will have bad yeast; and bad yeast will make bad bread. The ill consequences of one imprudent step will be felt in many an after step.

EASY LESSONS ON REASONING.

Lesson XI.

§ 1. An Argument [or Act of Reasoning expressed in words] is defined "an Expression in which, from something laid down [assumed as true] something else is concluded to be true, as following necessarily [resulting] from the other." That which follows from the other, is called (as was formerly explained) the "*Conclusion;*" and that from which it follows, the "Premises;" or in the language of some writers, the "Antecedent."

The above is the strict technical definition. But in ordinary language the word "Argument" is often employed to denote the *Premises* alone; or, sometimes that one of the Premises which is *expressed*, when the other is *understood:* as when one speaks of proving so and so *by* this or that *argument;* meaning, by such and such a Premise.

And you may observe, by the way, that of the two Premises, the *Major* (formerly explained) is, in common discourse often called the "Principle," and the Minor-premise, the "Reason."

Frequently also in common discourse "an Argument" is used to signify a "Series of arguments," leading ultimately to the Conclusion maintained.

An Argument if stated in such a regular form that "its conclusiveness [its being really an Argument] is apparent from the mere *form of expression alone,*" (independently of the meaning of the words) is then called a "Syllogism." As, "Every X is Y*; Z is X, therefore Z is Y:" in which, as was formerly explained, the truth of the Conclusion,—assuming the Premises to be true,—must be admitted, whatever Terms you may make X, Y, and Z, respectively, stand for.

You are to remember therefore that a Syllogism is not (as some have imagined) a *peculiar kind* of Argument; but only a certain *form* in which *every* Argument may be exhibited.

§ 2. One circumstance which has tended to mislead persons as to this point, is, that in a Syllogism we see the Conclusion following *certainly* [or *necessarily*] from the Premises; and again, in any apparent-syllogism which on examination is found to be (as you have seen in some of the examples) not a *real* one [not "valid"] the Conclusion *does not follow at all;* and the whole is a mere deception. And yet we often hear of Arguments which have *some* weight, and yet are not quite *decisive;* —of Conclusions which are rendered *probable,* but not absolutely *certain* &c. And hence some are apt to imagine that the *conclusiveness* of an Argument admits of *degrees;* and that sometimes a conclusion may, *probably and partially,*—tho' not *certainly and completely*—follow from its Premises.

This mistake arises from men's forgetting that the *Premises themselves* will very often be *doubtful;* and then, the Conclusion also will be doubtful.

As was shewn formerly, one or both of the Premises of a perfectly valid Syllogism may be utterly false and absurd: and then, the Conclusion, tho' inevitably following from them, may be either true or false, we cannot tell which. And if one or both of the Premises be merely probable, we can infer from them only a *probable* conclusion; tho' the *conclusiveness,*—that is, the connexion between the Premises and the Conclusion—is perfectly certain.

For instance, assuming that "every month has 30 days" (which is palpably false) then, from the minor-premise that "April is a month," it follows (which happens to be true) that "April has 30 days:" and from the minor-premise that "February is a month" it follows that "February has 30 days;" which is false. In each case the conclusiveness of the Argument is the same; but in every case, when we have ascertained the falsity of one of the Premises, we know nothing (as far as *that argu-*

* See above. Lesson ix. § 4.

ment is concerned) of the truth or falsity of the Conclusion.

§ 3. When however we are satisfied of the falsity of some *Conclusion*, we may, of course, be sure that (at least) one of the Premises is false; since if they had both been true, the Conclusion would have been true.

And this—which is called the "*indirect*" mode of proof—is often employed (even in Mathematics) for establishing what we maintain: that is, we prove the *falsity* of some Proposition (in other words, the *truth* of its *contradictory*) by shewing that if assumed as a Premise, along with another Premise known to be true, it leads to a Conclusion manifestly false. For tho', from a false assumption, either falsehood or truth may follow, from a true assumption, truth only can follow.

Let us now look to the case of a doubtful Premise. Suppose it admitted as *certain* that "a murderer deserves death," and as *probable* that "this man is a murderer," then, the Conclusion (that "he deserves death") is probable in exactly the same degree.

But tho' when one Premise is certain, and the other, only probable, it is evident that the Conclusion will be exactly as probable as the *doubtful Premise*, there is some liability to mistake, in cases where *each* Premise is merely probable. For tho' almost every one would perceive that in this case the probability of the Conclusion must be *less* than that of either Premise, the *precise degree* in which its probability is diminished, is not always so readily apprehended.

And yet this is a matter of exact and easy arithmetical calculation. I mean, that, *given* the probability of each Premise, we can readily calculate, and with perfect exactness, the probability of the Conclusion.

As for the probability of the Premises themselves that are put before us, that, of course, must depend on our knowledge of the *subject-matter* to which they relate. But supposing it agreed what the amount of probability is, in each Premise, then, we have only to state that probability in the form of a *fraction*, and to *multiply* the two fractions together; the product of which will give the degree of probability of the Conclusion*.

§ 4. Let the probability, for instance of each Premise be supposed the same; and let it, in each, be $\frac{2}{3}$: [that is, let each Premise be supposed to have two to one in its favor; that is to be twice as likely to be true as to be false] then, the probability of the Conclusion will be *two thirds of two thirds*; that is $\frac{4}{9}$;—rather less than one half. For since twice two is four, and thrice three, nine, the fraction expressing the probability of the Conclusion will be four ninths.

For example, suppose the Syllogism to be "A man who has the plague will die of it;" (probably) "this man has the plague;" (probably) therefore, (probably) "he will die of it." We are—suppose—not certain of either Premise; tho' we think each to be probable: we have judged—suppose,—that of 9 persons with the symptoms this man exhibits, two thirds,—that is, six—have the plague: and again, that *two thirds* of those who have the plague—that is, *four out of six*—die of it: then, of 9 persons who have these symptoms, 4 may be expected to die of the plague.

Again, "Every X is Y; ($\frac{2}{3}$) Z is X ($\frac{2}{3}$) therefore Z is Y" ($\frac{4}{9}=\frac{1}{2}$) let the fractions written after each Premise express the degree of its probability; and the result will be that which is given as the probability of the Conclusion.

For instance "A Planet without any atmosphere is uninhabited: the moon is a planet without any atmosphere; therefore the moon is uninhabited:" supposing these Propositions to be those represented in the former example (of X, Y, and Z) then the probability that "the moon is uninhabited," will be two thirds of three fourths; or one half; since $\frac{2}{3}$ multiplied by three fourths gives $\frac{6}{12}=\frac{1}{2}$.

In the examples just given, you will observe that the probability of each Premise has been supposed *more* than $\frac{1}{2}$; that is, each has been assumed to be *more likely* to be true than not; and yet there is, for one of these Conclusions, only an even chance; and for the other, less. The supposed patient is supposed to be rather *less* likely to die of the plague than not.

And of course when there is a *long train* of reasoning,—the Conclusion of each argument being made one of the Premises of a succeeding one,—then, if a number of merely-probable Premises are introduced the degree of probability diminishes at each successive stage.

And hence it may happen, in the case of a very long train of reasoning, that there may be but a slight probability for the ultimate Conclusion, even tho' the Premises successively introduced, should be, some of them, quite certain, and the rest, more probable than not.

And hence, we often have to employ several distinct trains of arguments, each tending separately to establish some degree of probability in the Conclusion.

§ 5. When you have two (or more) distinct arguments, each, separately, establishing as probable, the same conclusion, the mode of proceeding to compute the total probability, is the *reverse* of that mentioned just above. For, there,—in the case of two probable premises,—we consider what is the probability of their being *both* true; which is requisite in order that the conclusion may be established by them. But the case of a conclusion *twice* (or oftener) proved probable, by separate arguments, is like that of aiming at a mark at which you are allowed more than one shot; so that if these do not *all* miss, the mark is hit. You consider, therefore, what is the probability of *both* these indications of truth being *combined* in favor of any conclusion that is *not* true.

Hence the mode of computation is, to state (as a fraction) the chances *against* the conclusion as proved by *each* argument; and to multiply these fractions together, to ascertain the chances against the conclusion as resting on *both* the arguments combined; and this fraction being subtracted from unity, the remainder will be the probability *for* the conclusion.

For instance, let the probability of a conclusion as established by a certain argument, be $\frac{4}{5}$: (suppose,—that this patient will die of his disorder, from its turning out to be the plague) and again, of the same conclusion as established by another argument, $\frac{3}{4}$: (suppose,—of his dying of the disease, on its turning out to be some different one) then, the chances *against* the conclusion in each case, respectively, will be, $\frac{1}{5}$ and $\frac{1}{4}$; which multiplied together give $\frac{1}{20}$ or $\frac{1}{5}$ *against* the conclusion. The probability therefore *for* the conclusion as depending on these *two* arguments jointly, (*i. e.*, that the patient will die of the disorder) will be $\frac{4}{5}$, or two to one.

As for the degree of probability of each Premise, *that*, as we have said, must depend on the subject-matter before us; and it would be manifestly impossible to lay down any fixed rules for judging of this. But it would be absurd to complain of the want of rules for determining a point for which it is plain no precise rules can be given; or to disparage, for that reason, such rules as *can* be given for the determining of another point. Mathematical Science will enable us—*given*, one side of a triangle and the adjacent angles,—to ascertain the other sides; and this is acknowledged to be something worth learning, altho' mathematics will not enable us to answer the question which is sometimes proposed in jest, of "how long is a rope?"

Men are often misled in practice by not attending to these circumstances, plain as they are, when pointed out.

* Those who are at all familiar with Arithmetic will hardly need to be reminded, that,—since a *fraction* is *less* than a unit,—what is called (not strictly, but figuratively) *multiplying* anything by a fraction, means, taking it *less than once:* so that, for instance $\frac{1}{2}\times\frac{2}{3}$, that is a half multiplied (as it is called) by two-thirds, means, two-thirds of a half; *i. e.*, $\frac{2}{6}$ or $\frac{1}{3}$.

§ 6. It has been already explained that the Maxim [or Dictum] applicable to every Argument when stated in the clearest form, is, that "whatever is predicated universally of any term, may be predicated in like manner [affirmed, or denied, as the case may be] of whatever is comprehended under that term:" and that this consequently is the "*Universal Principle*" of Reasoning.

And you may observe that this Dictum [or Maxim] may in fact be regarded as merely the *most general* statement of "*An Argument*,"—not, this or that individual argument; but *any and every* "Argument, abstractedly."

For instance, if you say "this man is contemptible because he is a liar," you evidently mean to be understood, "every liar is contemptible; this man is a liar; therefore he is contemptible." Now if you so far *generalize* this Syllogism as to omit all consideration of the very terms actually occurring in it, *abstracting*, and attending solely to, the *form* of expression, you will have "Every X is Y; Z is X; therefore Z is Y" and then if you proceed to make a still further abstraction, saying, —instead of "Every X"—"*any-term-distributed*," and instead of "Y"—"anything-whatever affirmed of that term," and so on, you will have, in substance, the very "Dictum" we have been speaking of: which may be separated into three portions, corresponding to the three Propositions of a Syllogism: thus,

1. "Anything-whatever (as "Y") affirmed of a *whole class* (as "X")

2. under which class something else (as Z) is comprehended,

3. may be affirmed of that (namely "Z") which is so comprehended;"

These three portions into which the Dictum has been separated, evidently answer to the Major-premise, Minor-premise, and Conclusion, of the Syllogism given above. And it is plain that the like explanation will apply (if "denied" were put for "affirmed") to a Syllogism with a *negative* conclusion. So that the "Dictum" is in fact, as we have said, merely the most abstract and general form of stating the *Act of Reasoning*, universally.

§ 7. Some persons have remarked of this "Dictum" (meaning it as a disparagement) that it is merely a somewhat circuitous *explanation* of *what is meant by a Class*. It is, in truth, just such an explanation of this as is needful to the student, and which must be kept before his mind in reasoning. For you are to recollect that not only every Class [the Sign of which is, a "Common term"] comprehends under it an indefinite number of individuals, —and often of other Classes—differing in many respects from each other, but also that most of those individuals and classes may be referred, each, to an indefinite number of classes, (as was formerly explained) according as we *chuse to abstract* this point or that, from each.

Now to *remind* one, on each occasion, that so and so is referable to such and such a Class, and that the Class which happens to be before us comprehends such and such things,—this, is *precisely all that is ever accomplished by Reasoning*.

For you may plainly perceive, on looking at any of the examples above, that when you assert both the Premises taken in conjunction, you have, virtually, implied the Conclusion. Else indeed it would *not* be impossible (as it is) for any one to deny the Conclusion, who admits both Premises.

§ 8. Hence, some have considered it as a disparagement to a Syllogism (which they imagine to be *one kind* of Argument) that you can gain no *new truth* from it; the Conclusions it establishes being in fact known already, by every one who has admitted the Premises.

Since however a Syllogism is not a certain distinct kind of argument, but *any* argument whatever, stated in a regular form, the complaint, such as it is, lies against Reasoning altogether.

And it is undeniable that no *new truth*,—in one sense of the word—(and that, perhaps, the strictest sense) can ever be established by *Reasoning alone;* which merely unfolds as it were, and develops, what was, in a manner, wrapped up and implied in our previous knowledge; but which we are often as much unaware of, to all practical purposes, till brought before us, as if it had been wholly beyond our reach.

New truths,—in the strictest sense of the word—that is, such as are not implied in anything that was in our minds before,—can be gained only by the use of our senses, or from the reports of credible narrators, &c.

An able man, may, by patient Reasoning, attain any amount of mathematical truths; because these are all implied in the Definitions. But no degree of labour, and ability, would give him the knowledge, by "*Reasoning*" *alone*, of what has taken place in some foreign Country; nor would enable him to know, if he had never seen, or heard of, the experiments, what would become of a spoonful of salt, or a spoonful of chalk, if put into water, or what would be the appearance of a ray of light when passed thro' a prism.

§ 9. These two modes of arriving at any truth are perceived by all men as distinct. And they are recognized in the expressions in common use. The one is usually called "*information;*" the other "*instruction**." We speak of trusting to the *information* (not, the *instruction*) of our senses. Any one who brings *news* from any place, or who describes some experiments he has witnessed, or some spot he has visited, is said to afford us *information*

A Mathematician again, a Grammarian,—a Moralist —any one who enters into a useful discussion concerning human life,—any one in short who satisfactorily *proves* anything to us by *reasoning*,—is said to afford us *instruction*.

And in conversing with any one who speaks judiciously, one sometimes says "very true!" or "that is a very just remark: that never struck me before &c." In these and suchlike expressions, we imply both that what he says is not *superfluous*, but valuable and important, and also that we are conscious of having ourselves possessed, in our own previous knowledge, the germ of what he has developed, and the means of ascertaining the truth of what he has said; so as to have a right to bear *our testimony to it*.

But when any one gives us *information* about a foreign Country, &c. tho' we may fully *believe* him, and be interested by what he tells us, we never think of saying "very true!" or "you are quite right." We readily perceive that in this case the knowledge imparted, is new to us in quite another sense; and is what no *reasoning* alone could have imparted; being not *implied* in anything we knew already.

These two modes of attaining what are, in different senses, new truths, (and which of course, are often *mixed* together) may be illustrated by two different modes in which a man may obtain an addition to his wealth. One man, suppose, has property to a certain value, *bequeathed* to him: another *discovers* on his estate a mine of equal value. Each of these is enriched to the same degree. But the former of them acquires what he had, before, *no right* to: the latter merely comes to the knowledge and use of that which was before, legally, his property; tho', till discovered, it brought him no advantage.

Any mode of attaining knowledge, distinct from *Reasoning*, is, of course, foreign from the present inquiry.

* It is not meant that this is the *only* sense of these words.

A SLOW fire makes sweet malt.

It is observed that a fierce fire half burns the malt, and destroys most of its sweetness. In like manner, everything that is done with impetuous violence and hurry, is the worse done.

THE SEA.

A SUMMER AND WINTER VIEW.

TURN to the watery world!—but who to thee
(A wonder yet unviewed) shall paint—the Sea?
Various and vast, sublime in all its forms,
When lulled by zephyrs, or when roused by storms,
Its colours changing, when from clouds and sun
Shades after shades upon the surface run;
Embrowned and horrid now, and now serene,
In limpid blue, and evanescent green;
And oft the foggy banks on ocean lie,
Lift the fair sail, and cheat th'experienced eye.
Be it the Summer-noon: a sandy space
The ebbing tide has left upon its place;
Then just the hot and stony beach above,
Light twinkling streams in bright confusion move;
(For heated thus, the warmer air ascends,
And with the cooler in its fall contends.)
Then the broad bosom of the ocean keeps
An equal motion; swelling as it sleeps,
Then slowly sinking; curling to the strand,
Faint, lazy waves o'ercreep the ridgy sand,
Or tap the tarry boat with gentle blow,
And back return in silence, smooth and slow.
Ships in the calm seem anchored; for they glide
On the still sea, urged solely by the tide;
Art thou not present, this calm scene before,
Where all beside is pebbly length of shore,
And far as eye can reach, it can discern no more.
Yet sometimes comes a ruffling cloud to make
The quiet surface of the ocean shake;
As an awakened giant, with a frown,
Might show his wrath, and then to sleep sink down.
View now the Winter-storm! above, one cloud,
Black and unbroken all the skies o'ershroud;
Th'unwieldy Porpoise through the day before
Had rolled in view of boding men on shore;
And sometimes hid, and sometimes showed his form,
Dark as the cloud, and furious as the storm.
All where the eye delights, yet dreads to roam,
The breaking billows cast the flying foam
Upon the billows rising—all the deep
Is restless change; the waves so swelled and steep,
Breaking and sinking, and the sunken swells,
Nor one, one moment, in its station dwells:
But nearer land you may the billows trace,
As if contending in their watery chase;
May watch the mightiest till the shoal they reach,
Then break and hurry to their utmost stretch;
Curled as they come, they strike with furious force,
And then re-flowing, take their grating course,
Raking the rounded flints, which ages past
Rolled by their rage, and shall to ages last.
Far off the Petrel, in the troubled way
Swims with her brood, or flutters in the spray;
She rises often, often drops again,
And sports at ease on the tempestuous main.
High o'er the restless deep, above the reach
Of gunner's hope, vast flights of Wild-ducks stretch;
Far as the eye can glance on either side,
In a broad space and level line they glide;
All in their wedge-like figures from the North,
Day after day, flight after flight go forth.
In-shore their passage tribes of Sea-gulls urge,
And drop for prey within the sweeping surge
Oft in the rough opposing blast they fly
Far back, then turn and all their force apply,
While to the storm they give their weak complaining cry
Or clap the sleek white pinion to the breast,
And in the restless Ocean dip for rest.—CRABBE

ANGER is, at first, an offence taken at an ill behaviour, an emotion of mind raised at the sense of injuries done to us or to others. The use of anger is to stir us up to self-preservation, and to put us upon our guard against injuries. When it has done this, it has performed all that belongs to it; for what measures we may take to effect this, how we may secure ourselves, and how we should behave towards those who offend us, these are points concerning which we must not consult our passions, but our reason; which was given us to moderate our passions, and to prescribe laws for our actions.—JORTIN.

THE WILLOW WARBLER.

A REMARKABLE instance of the attachment of the Willow Warbler to its nest, is thus recorded in the *Field Naturalist* by a lady. "In the spring of 1832, walking through an orchard, I was attracted by something on the ground in the form of a large ball, and composed of dried grass. I took it up in my hands, and upon examination found it was a domed nest of the Willow Wren, *Silvia Trochilus*. Concerned at my precipitation, I put it down again as near the same place as I could suppose, but with very little hope that the architect would ever claim it again after such an attack. I was, however, agreeably surprised to find, next day, that the little occupier was still proceeding with its work. The feathers inside were increased, as I could perceive, by the alteration in colour. In a few days, two eggs were laid, and I thought my little *protégé* safe from harm, when a flock of ducks, that had strayed from the poultry-yard, with their usual curiosity, went straight to the nest, which was very conspicuous, as the grass had not grown high enough to conceal it, and with their bills spread it quite open, displayed the eggs, and made the nest a complete ruin. I now despaired; but immediately on driving the authors of the mischief away, I tried to restore the nest to something like its proper form, and placed the eggs inside. That same day I was astonished to find an addition of another egg; and in about a week four more. The bird sate, and ultimately brought out seven young ones; but I cannot help supposing it a singular instance of attachment and confidence, after being twice so rudely disturbed."—YARRELL'S *British Birds*.

TURKISH HONESTY.

AN open gallery, extending along the whole of the northern side of the edifice [Solimanie, at Constantinople,] is filled with chests of various sizes and descriptions, piled one on the other, and carefully marked; these chests contain treasure, principally in gold, silver, and jewels, to a vast amount, and are all the property of individuals, who, in the event of their leaving the country, family misunderstandings, or from other causes, require a place of safety in which to deposit their wealth. Each package being accurately described, and scrupulously secured, is received and registered at Solimanie, by the proper authorities, and there it remains intact and inviolate, despite national convulsions and ministerial changes. No event, however unexpected, or however extraordinary, is suffered to affect the sacredness of the trust; and no consideration of country or of religion, militates against the admission of such deposits as may be tendered by persons anxious to secure their property against casualties. On one side may be seen the fortune of an orphan confided to the keeping of the directors of the institution during his minority; on the other, the capital of a merchant who is pursuing his traffic over seas. All classes and creeds alike avail themselves of the security of the depository; and although an individual may fail to reclaim his property for twenty, fifty, or even an unlimited number of years, no seal is ever broken, no lock is ever forced. And despite that this great national bank, for as such it may truly be considered, offers not only an easy but an efficient and abundant means of supply, no instance has been known in which government has made an effort to avail itself of the treasures of Solimanie.—*City of the Sultan*.

BENEVOLENCE is not in word and in tongue, but in deed and in truth. It is a business with men as they are, and with human life as drawn by the rough hand of experience. It is a duty which you must perform at the call of principle; though there be no voice of eloquence to give splendour to your exertions, and no music of poetry to lead your willing footsteps through the bowers of enchantment. It is not the impulse of high and ecstatic emotion. It is an exertion of principle. You must go to the poor man's cottage, though no verdure flourish around it, and no rivulet be nigh to delight you by the gentleness of its murmurs. If you look for the romantic simplicity of fiction, you will be disappointed; but it is your duty to persevere, in spite of every discouragement. Benevolence is not merely a feeling, but a principle, not a dream of rapture for the fancy to indulge in, but a business for the hand to execute.—CHALMERS.

SEASONAL WILD FLOWERS.

JUNE.

At this sweet time, the glory of the Spring,
Young verdurous June's delightful opening,
When leaves are loveliest, and young fruits and flowers
Fear not the frosts of May's uncertain hours;
Rich, rife, luxuriant, yet with tenderest hues,
Waves the full foliage, and with morning dews
And showers that gush down from the radiant skies
To bring below the air of Paradise,
Awakening freshest fragrance as they pass,
There is a peerless greenness in the grass,
Yet somewhat darkened with the loftier swell,
And purple tinge of spike and panicle;
While vivid is the gleam of distant corn,
And long and merry are the songs of morn.—Howitt.

If the sweet May blossoms were the most abundant and the most beautiful productions of the last month, so may the fragrant dog-rose be regarded as the most characteristic flower of June. While our gardens are blushing in the pride of their summer attire, of which the rose, in all its splendid varieties, forms the most conspicuous feature, the hedges are more simply, but not less gracefully adorned with the Wild or Dog-Rose (*Rosa canina*). This sweet flower, with its delicate pink and white petals, is more prized by the botanist, owing to the pure simplicity of its form, than all the double roses of the garden. The dog-rose is very common in our hedges and thickets, and when the roses have disappeared, the bush is scarcely less attractive to village children; for the blossoms are succeeded by the large scarlet berries, called *heps* or *hips*, just as the May blossom is succeeded by the lesser crimson berries called *haws*. These berries, which remain long on the branches, and furnish a supply of food to numerous birds as winter comes on, are also eaten by children without any injurious effect. Many a hungry truant no doubt has been content to do as Cowper did in his school-days,-who says:—

For I have loved the rural walk through lanes
Of grassy swarth, close cropped by nibbling sheep,
And skirted thick with intertexture firm
Of thorny boughs; have loved the rural walk
O'er hills, through valleys, and by river's brink,
E'er since a truant boy, I passed my bounds,
T'enjoy a ramble on the banks of Thames;
And still remember, nor without regret,
Of hours, that sorrow has since much endeared,
How oft, my slice of pocket store consumed,
Still hungering, penniless, and far from home,
I fed on *scarlet hips* and *stony haws*,
Or blushing crabs, or berries, that emboss
The bramble, black as jet, or sloes austere.
Hard fare! but such as boyish appetite
Disdains not, nor the palate, undepraved
By culinary arts, unsavoury deems.

The dog-rose is the most beautiful of the wild flowers contained in the Rose Tribe, but there are kindred flowers which, though less beautiful in appearance, are followed by more palatable fruit. Such is the common Bramble (*Rubus fruticosus*), flowering rather later than the rose, and affording a most abundant supply of berries, well known as *black-berries*. Such also is the Blue Bramble or Dew-berry bush (*Rubus cæsius*), with small white or pale rose-coloured flowers, and large-grained fruit covered with a fine bloom, like that on the plum or grape. And such is likewise the Wood Strawberry, belonging to another family, but included in the Rose Tribe.

There are other members of the same tribe now in blossom, and these we will proceed to notice. The pretty little herbs called Cinquefoil (*Potentilla*) have received an accession to their numbers, most of the species being now in full beauty. The most common are the creeping and the silvery or hoary cinquefoil, with the silver-weed or wild tansy. They bear bright yellow flowers, precisely of the same shape and character as those of the strawberry, and differing only in colour. There is a plant whose blossom is very much like that of the cinquefoil, called Avens, or herb-bennet. It belongs to the Geum family in this tribe. But the leaves are different, and the fruit is a sort of bur, with stiff bristles. There are two other divisions of plants which by some botanists are included in the Rose Tribe, and by others reckoned distinct from it. These are the Apple and the Almond Tribes, including our most delicious fruits. It is of little consequence whether we consider them as one tribe or three; they are so closely allied to each other in many particulars that an acquaintance with one, affords a knowledge of the chief characteristics of all.

We now leave the Rose Tribe in order to notice the plants of another and a still more conspicuous tribe, now blossoming in our fields to the annoyance of the farmer. This is the Poppy Tribe, a few species of which grow abundantly among corn, and are known as red-weed, while another species furnishes the destructive drug, opium, so injurious to a large portion of the human race. Besides these there is the horned poppy on our sea-coasts, so named from its bearing long stiff horns instead of round poppy-heads for seed-vessels, and some others. A beautiful plant belonging to this natural order, brought from Escholt's Bay, and called Escholtzia, is now common in gardens. We notice it here merely to introduce a remark of Dr. Lindley's concerning it which explains a common occurrence in other plants.

The flower of this species before it expands is inclosed in a taper-pointed green sheath, shaped like a hutkin, which is pushed off by degrees as the petals unfold, and at last drops to the ground. This is the calyx, which, like that of the poppy, is formed of two sepals; these sepals grow so firmly together by their edges, where they touch each other, that when the time for them to fall off arrives, they are unable to separate; but as it is absolutely indispensable to the plant that the calyx should in some way or other be got rid of, in order to enable the flower to expand, nature has provided the calyx with the means of separating from the stalk by its base; and thus it is pushed off in the manner I have mentioned.

To the Poppy Tribe also belongs the greater Celandine (*Chelidonium majus*), which grows in shady lanes and waste ground, and may be known by its pale green cut leaves, small yellow flowers, and by the orange-coloured juice which issues from it as we pluck it. In many particulars, plants of the Poppy Tribe closely resemble those of the Crow-foot Tribe, mentioned in former articles; but there is this important difference;—a milky fluid abounds in poppies, and flows out if we break a leaf or stem; while the fluids in plants of the Crow-foot Tribe are watery and transparent. Numerous plants of the latter tribe are now in blossom. The meadows look rich with the different species, among which the showy Marsh Marigold (*Caltha palustris*) still shines conspicuous. A very beautiful family included in the Crow-foot Tribe has for several weeks past enlivened the copses, the lanes, or open pastures where the different species are found. This is the Anemone, or Wind-flower family, so well known in the cultivated state, as affording hardy and handsome plants for our gardens. But those persons who have seen the delicate blossoms of the Wood-anemone (*Anemone nemorosa*) opening in rich profusion before them, as they explored some tangled thicket, or green lane over-arched with boughs and sheltered from the summer heat, will scarcely admit that any of the cultivated species are comparable with the wild flower. In these moist and shady situations the wood-anemone attains a luxuriant growth, and is much more beautiful than when found, as is sometimes the case, on open heaths. This plant is about a foot in height, with leaves much divided, and single fair white blossoms of six petals, the outer sides of which have a purplish tint. There is a species with dull violet petals, silky on the outside which grows in open pastures. It is smaller of growth

and less remarkable for beauty than the wood-anemone; but it agreeably enlivens the scanty vegetation among which it is found. This species is called the Pasque flower (*Anemone pulsatilla*).

Nearly allied to the anemonies is the Adonis or Pheasant's Eye, one of the most beautiful of wild flowers. It is an annual plant flowering from May to October. Very few of the lesser annuals which are so carefully sown in our gardens year by year have half the beauty of this little gem. The leaves are of a bright but tender green, so minutely divided that they look like the beautiful spines of the larch, rather than like ordinary leaves, and from their rich profusion shines out the ruby blossom, small, but of a deep pure crimson that eclipses many a garden flower. In some parts of England this plant is extremely rare. The writer was for a long time unable to collect more than two or three specimens, and these were found growing among vetches or corn. It was therefore a subject of surprise and pleasure, a few days ago, to hear in the neighbourhood of London the cry of "*Flos Adonis*," and to see a well-filled basket of these beautiful little flowers exhibited for sale. We trust this is a proof that the plant is coming into cultivation as a garden flower, and may soon be as general a favourite as Verbena, or any other brilliant blossom of the parterre. It has received its name of pheasant's eye, from a remarkable likeness to the eye of a pheasant. The centre of the flower is nearly black like the pupil of the eye, and the rich colour of the petals well represents the beautiful hue that surrounds the eye of the bird.

While there are so many June flowers to be admired, there are also some to be shunned. Such is the flower,—

> Laced with purple veins
> Fair to the sight, but by the smell
> Unprized, the *Henbane's* straw-tinged bell,
> With danger pregnant.

The Black Nightshade (*Solanum nigrum*) also springs up wherever a spot of ground is suffered to become waste. The leaves are egg-shaped and slightly toothed at the edge, seated alternately upon the stem. The flowers are white, with five equal divisions which turn back and expose the anthers. The whole plant is fetid and narcotic. Black berries succeed the flowers. The Woody Nightshade or Bitter-Sweet (*Solanum dulcamara*) has a shrubby branched stem, purple flowers, and scarlet berries. This plant, as well as the last, is poisonous. The blossoms of these plants much resemble those of the potato plant, and in fact we find that the wholesome root we so much value belongs to the Nightshade Tribe. The berries of the potato are poisonous, while the tubers, when cooked, are very wholesome.

The Deadly Nightshade (*Atropa belladonna*) belongs to another genus, and is far more dangerous than either of the species just named. The blossom is a dull purple bell, succeeded by shining black berries, which have a sweetish taste, but produce the most fatal effects. The plant sometimes grows to the height of three feet; happily for us it is not common; but where found it is generally in hedges or waste ground.

> But more full
> Of danger, dark of hue, and dull
> Of aspect, near with purple flowers
> Perchance the *Deadly Nightshade* lowers.
> Look if you will: but ah, beware,
> Nor lured by specious beauty dare
> To taste the poisonous berry fell!
> Vain were each magic charm and spell
> Of old by white-robed Druid tried,
> With vervain bough that blooms beside;
> Vain were each salutary root,
> Each pungent juice, emetic fruit,
> To break the lulling stupor deep
> And rouse you from that mortal sleep.

Another dangerous plant not truly native, but now growing in a wild state in several parts of England, is the Monk's Hood or Wolf's Bane (*Aconitum napellus*). The dark blue helmet flowers grow on tall stems, and are in blossom from May to July. Unfortunately the plant appears to be a favourite with cottagers, and is often found growing abundantly in their gardens. Yet it is highly dangerous to their children, for not only would the eating of any portion of the plant probably be fatal to them; but by gathering the stems when the fingers have been cut or scratched, the juice may produce the most injurious effects. Cases of this kind have been followed by excessive pain, extending over the whole limb, heartburn, dread of suffocation, fainting, and at last mortification.

There is yet another plant of a highly poisonous nature which we must notice as blowing in June. This is the Foxglove (*Digitalis purpurea*), whose handsome pendulous blossoms thickly invest a stem that rises from two to four feet in height. The flowers are bell-shaped, of a purplish red, and displaying beautiful leopard spots in the interior. The lowermost buds open first, and fresh flowers continue to unfold in regular succession up the stem, so that although the blossoms drop off one by one, the beauty of the plant is still continued, and it is found in bloom from June to September. The poet Cowley fancifully says,—

> The foxglove on fair Flora's hand is worn,
> Lest while she gathers flowers, she meet a thorn.

Whether we traverse copse, or lane, or corn-field, or meadow, wild flowers are to be seen in great abundance everywhere. Among the green corn we find many a bright blossom, such as the Poppy, already named, the blue Corn-flower, the Corn-cockle, the Scabious, the Pimpernel, the Corn-marigold, the Field-mustard, or Charlock, &c.

> But where the living waters glide
> Bathing the summer flowers beside,
> Behold the lucid Pond-weed show
> Its dark green spike above; below
> The swelling stalk and wavy leaves
> The river's circling breast receives.
> There may the purple Avens bend
> The graceful head, though oft it spend
> Its sweetness on the Alpine height:
> With yellow Loosestrife's clusters bright;
> Tall Willow-herb with roseate blush;
> With purple tinge the flowering Rush;
> Pale Meadow-sweet with feathery spray,
> And fragrant as the blooming May:
> Blue Brooklime; and of rival dye,
> Marked with a central yellow eye,
> The Mouse-ear blue: though which may claim
> Of right the legendary name
> That points to absent friends the thought,
> And warns you to "forget them not,"
> Fair florists differ.

The Yellow Iris, or Water-Flag, also blossoms at this time. This plant as well as the purple species is exceedingly common. It grows in marshy places, and by the sides of streams and lakes. The iris was used by the ancients as the symbol of eloquence; and was sometimes sculptured by the Egyptians on the brow of the Sphinx. This flower has long been the national device of France, and the name of *fleur-de-lis* by which it is generally known, is nothing more than a corruption of *Fleur de Louis*. The author of *Flora Historica* thus speaks of the fact.

About the middle of the twelfth century, Louis VII., of France, having been excommunicated by the Pope, and his kingdom laid under an interdict, was persuaded to take up the cross, and join in the romantic expedition of the Crusaders, on which occasion he distinguished himself, as was the custom of those times, by a particular blazon, and for which he chose the Iris flower, that was from hence called *Fleur de Louis*, Louis's flower, and which was first contracted into *fleur de Luce*, and afterwards into *fleur de lis*, lily flower, although it has no affinity to the lily.

LONDON:—JOHN W. PARKER, PUBLISHER, WEST STRAND.